



The Arboretum Bulletin



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Keep the Hoe Going

(EDITOR'S NOTE: The following is an excerpt from *The Gardeners' Chronicle* of England for June 6, 1942. It is so apropos to gardening activities for the present season and, furthermore, it is so interestingly written, that we present it in its entire, original form.)

SOIL physics, the youngest of the band of scientific reformers of agricultural practice, is, as the young are apt to be, full of revolutionary ideas. Rejoicing in the strength of its youth, it treats our old customs and traditions with scant ceremony. We gardeners have, for example, been brought up to make constant use of the hoe. The better the gardener the sharper the hoe. All through the windy drought we have been hoeing. The satisfaction we felt as the Dutch hoe cut through the weeds and made a fine tilth might perhaps have been blunted if the soil scientist had come into the garden, watched us at work and, when we had put away our tools, remarked with an amused smile, "You might as well let the hoe go hang. Apart from checking weeds among the seedlings, hoeing's no good."

But the well-informed gardener would reply, "You used to tell us that hoeing makes the water in the lower layers of the soil rise up to the surface—capillary rise, you called it."

"There's no such thing," he replies. "Capillarity does next to nothing to haul up the water in the soil, and so the old idea that the loose mulch the hoe makes checks the capillary rise and so conserves the water is all moonshine."

"Come and look at my onion bed," the gardener says. "I have only hoed half, but am going to finish it tomorrow." They went and looked. The hoed half was as fresh as paint, the unhoed had a wilted look. There was a crust of caked soil over it. Well, the soil physics expert admitted hoeing does do some good in this case: "It breaks the hard crust and so prevents it from injuring the roots."

"There is more to it than that," the gardener answered; "a lot more, I believe. Look at those gaping cracks where the hoe has not been used. If I did not keep the hoe going it would be all cracks, and the more the soil cracked the drier it would get. There are thousands of gardens like that," he added, "even when the soil has very little clay in it. You let the ground crack about a newly planted tree if you want to make sure of killing it, in droughty weather. Then," went on the gardener, brandishing his hoe, "there's another thing. We gardeners water our crops when the ground begins to get dry. If we did not hoe, very soon afterwards the ground would cake worse than ever, and crack too. That is why I have my narrow onion hoe an inch or less wide. I should have lost all my early peas in the east wind if I had not watered and hoed them three or four times. And you can see for yourself how well they look."

"Yes, they do look well," the soil physics expert admitted, for he was as urbane as he was brilliant.

"I think," the gardener continued, "that temperature may perhaps come in also. Roots like to keep cool, and perhaps it may be that hoeing helps them in some way to do it. It would be interesting to know if there is anything in that." Then he added, with a pleasant smile, "I must knock off now. I have a lot of hoeing to do tomorrow."

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A Green Lawn In Summer

THE ANTIDOTE for a brown lawn in summer does not lie solely in copious watering, as many householders apparently think. However, there are other important things also. In glacial country such as ours here in the Puget Sound region, where the topsoil is quite sandy, it is true that a lot of water must be applied if the grass is to live and stay green. The physical nature of the soil is obviously one very important factor, but only one.

If you are building a new lawn on sandy soil the first thing that should be added is a liberal quantity of clay and organic matter. Both these materials have a greater water-holding capacity than does the sand and the resulting mixture will not become completely dried out as easily. On an established sod where the soil is sandy and where the complete remaking of the lawn is not contemplated, the use of an annual top-dressing of a clay-loam containing plenty of organic material will help to correct the condition.

The organic substances—peats, leaf-molds, manures—are very desirable. They can absorb and hold quantities of water that becomes gradually available to the roots of the grasses. They also provide certain needed food elements. This last statement suggests another thing that gardeners can do, *i.e.*, fertilize. It is much easier to keep grass green during the summer if there is plenty of plant food in the soil.

With ample amounts of fertilizers applied at regular intervals, you will find it much easier to keep your lawn green with a minimum of water. Spring and fall are the best seasons for applying fertilizers but it can be done during the summer if you have neglected this important task during the spring. After putting the fertilizer on, be sure to water it in thoroughly. Several light applications would be better than a single heavy one at this season.

Bear in mind that anything you can do to force the grass roots to grow deeper into the soil will also enable the plants to stay green longer. There is one rather definite practice that you should follow in order to force the roots down. When you water, do a complete, thorough job of it. Soak the lawn so that the water reaches far down into the soil. This tends to concentrate the roots at a somewhat lower level where moisture remains for a longer time. Frequent, light waterings cannot substitute for thorough soakings at longer intervals.

How to Care for Garden Annuals During Dry Months

NOT MANY sections of our country are blessed with an abundance of rain during the summer and even in the wetter areas there are always local spots, such as south or southwest-facing slopes or sandy hilltops, which become excessively dry.

Under both circumstances it is necessary for the gardener to do at least one of three things (or often all three) in order to create a nice looking garden. Obviously the first thing that might be done would be to water heavily. Another would be to provide some shade, as by means of a screen planting of trees, so that the full force of the sun would not strike the garden during mid-day—from 11:00 a. m. to 3:00 p. m.—and the third would be to choose those types of plants which are known to be resistant to dry conditions.

A knowledge of the native habitats of the ancestors of our garden plants is one of the best means, beyond the actual experience of growing them, of judging the abilities of plant types to resist drought conditions. We know for example that the marigolds have been derived from species native to the dry sections of southern United States, Mexico and Central America. Hence, you can depend upon them. Practically all of the types enjoy conditions that are somewhat "on the dry side."

Zinnias likewise thrive under the same conditions and it is not at all difficult to envision a most attractive annual garden composed entirely of the varieties of these two fine types. The marigolds would give you excellent extremes in height and plenty of yellows, golds and bronzes. The zinnias would provide low and intermediate heights and the possibility to blend whites, more yellows, and whites, pinks and reds, so that the ultimate effect would be anything but monotonous.

Then there are the eschscholtzias, or California poppies, which also grow and seed abundantly under dry conditions and each year brings improvements of one kind or another in them. The dark bronze shades, deep oranges, very light yellows and creams give a more extended color range than most of our gardeners use. And now come newer forms with silvery gray foliage and more erect growth habits. More effective use of these qualities is not at all difficult. Then there are hunnemanias, annual poppies, cosmos, calliopsis, portulacas, sanvitalia, vinca rosea and even some petunias which might well be used to round out the picture in the dry garden.

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Annual Report of Arboretum Work

JUNE 1, 1941—MAY 31, 1942

By JOHN H. HANLEY, Director

IN THIS ISSUE we continue with Mr. Hanley's very complete report of the accomplishments of the Foundation during the past year:

Rhododendron Glen

Additions to the collection in the Glen were more important from the standpoint of the species involved than from the actual numbers planted. The following list is made up of several especially fine species that have been given space since November 17, 1941:

Rhododendron candelabrum, *R. carolinianum*, *R. caucasicum*, *R. charitopes*, *R. charitostreptum*, *R. Deleiense*, *R. glaucum*, *R. leucaspis*, *R. pemakoense*, *R. racemosum*, *R. Souliei*, *R. Stewartianum*, *R. tephroplum*, *R. Thomsonii* and *R. Wardii*.

Those of you who know rhododendrons will recognize that the above list includes several species from each of the three series *Boothii*, *Glaucum* and *Thomsonii*. We regard all of them very highly as ornamentals and stress their importance in the final picture that is being created here—a nine-acre valley, traversed by a naturalistic stream course, supporting an open stand of native firs, hemlocks, cedars and maples beneath which are now being arranged all of these fine rhododendron species and varieties. With the 750 plants of the Tenny collection as a nucleus, and the addition of some 1,400 more, the Glen is rapidly taking on a more complete appearance. Even now, in early June, there is ample color in that area where *Rhododendron Griersonianum* and its hybrids are planted.

Azalea Way

The addition of 58 trees of *Prunus serrulata* Fugenzo to the Azalea Way tract has completed the list of cherry varieties needed there. No substantial plantings of azaleas were made this season although a few plants each of a number of rare varieties were received. These have been placed in the nursery and will be used as stock plants for propagating. Maintenance of Azalea Way during the summer has been made possible through the receipt of substantial funds from the Seattle Garden Club.

Miscellaneous Plantings

Miscellaneous plantings of merit have been made as follows:

Magnolia—the Fabi Memorial planting of some 30 species and varieties.

Woodland Garden—*Oxydendrum*, *Liquidambar*, *Liriodendron*, *Spiraea*, *Cornus*, *Laburnum Watereri*, ferns and orchids.

Prunus—a rather complete collection of ornamental peach and apricot varieties.

Foster Island—*Larix*, *Laburnum*, *Cytisus*, *Betula* and *Thuja* in natural groupings.

Lagoon Section—*Lupinus arboreus*, *Laburnum*, *Pterocarya*, *Salix* (223 willow trees of 14 types).

Lookout Point—*Erica arborea* (tree heather), *Kalmia*, *Arbutus*.

Sumac Section—a very complete collection of *Rhus* species.

Buddleia—125 plants of several species.

Dogwood Section—*Cornus capitata* (evergreen, large flowers) and *C. obliqua*.

Virburnum—several plants each of *V. carlesii* and *V. fragrantissima*.

1942 All-America Trials

For the third consecutive year the Arboretum will grow the complete list of new annuals that are being tested in the 16 official trial grounds throughout the United States and Canada. In keeping with our policy of limiting such activities as much as possible, we shall forego the use of the additional annuals that were included during the last two years. Thus, there will be in the trial gardens only the 26 new forms that are being grown for judging. The garden will be open for the inspection of the public during July, August and September.

Demonstration Victory Garden

Under the sponsorship of the Seattle Civilian War Commission, the Seattle Garden Club and the Arboretum, we are maintaining a demonstration planting of vegetables, modeled after the plan published by Washington State College for a family of five. Our efforts along this line have been motivated by a desire to link our project as closely as possible to the war effort. Invaluable assistance is being given to those gardeners of Western Washington who avail

themselves of the opportunity to learn at first hand the things that should be done in order to harvest a good crop of various types of vegetables. There is a definite need for a much wider dissemination of this type of information.

In connection with the garden, the director is giving a course in vegetable culture and to make it even more valuable, a series of special lectures have been and will continue to be arranged. Mr. L. G. Smith, extension entomologist of Washington State College, conducted the first such special class on Saturday, May 16. Other local authorities will be used as they become available and as the season advances.

Volunteer Assistance

We are very happy to extend our sincere thanks to the many individuals and groups who have been coming to the Arboretum since last fall to help us with various details of the work in the greenhouses, nursery and rock garden. This type of aid is very important to us and it is our hope that it can be extended at least until the present period of emergency has passed.

Conclusion

In conclusion, permit me to re-emphasize the extreme value of all of the types of cooperation that we have been getting from the Foundation, from garden clubs and similar organizations, and from individuals. Because of the nature of the sponsorship of our Arboretum project, the successful culmination of our endeavors depends wholly upon a continuance of this type of help. In order to appreciate the place of the Arboretum in the life of the community and the state, one must have the ability to look into the future and envision the ultimate beauties of the work just now beginning. It is our hope that there are a sufficient number of you who have that ability so that there can never be even the slightest faltering in our steps toward that ultimate goal. The spirit of helpful cooperation that we have received in the past and up to the immediate present, most certainly augurs well for the future of the University of Washington Arboretum. Your director wishes to express his personal thanks to all of you. It has been a great pleasure to work with you during the past three and one-half years and there is no reason why that condition cannot be maintained during the future years.

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Comments on Rock Gardening

By JOHN H. HANLEY

IN ORDER to appropriately introduce our brief discussion on the subject of rock gardening we should consider (1) the impelling motives which brought it into being and (2) how these motives should be used to guide us in the construction and maintenance of the rockery.

Impelling Motives

To bring about a better understanding of the basic principles of rock gardening and the reasons behind the origin of the movement let us pursue a partially hypothetical line of reasoning back to a first instance. We may suppose in the first place that the original idea came from some plant enthusiast who, in travelling the high mountains, became smitten with the intense beauty and individuality of the flora. Having attempted to transplant these interesting individuals into the home grounds with only moderate success he may have conceived the idea of bringing down with them some of the rocks and soils of the native haunts in order that natural conditions might better be simulated. Finding that this practice led to better success and having continued it to accommodate the newer plants brought in at each opportunity, there finally resulted a comparatively large garden which might rightly be termed an original type of rockery.

The things to be remembered from this hypothetical example are (1) that the plants were of first importance and (2) that the rocks were placed as aids or complements to the plant life.

On the other hand we might justifiably suppose that the original impulse came from an individual who desired to create in the vicinity of his home a model of some outstanding natural feature. He may have been impressed by the beauty of a mountain peak to the extent that he wished to duplicate it in miniature so that it might be close at hand for his enjoyment. He may have wished to create in miniature a prominent mountain ridge, or a series of ridges, or a cool, pleasant ravine, or perhaps only an interesting mountain slope or meadow. Whatever the feature, we may rightly suppose that after its construction he found need for adding the plant life, found growing upon it in nature, in order to increase the sense of realness and trueness. In this instance we find that the rocks or natural mountain features rank first while the plant material is secondary.

In discussing the logic of the two hypotheses we might say that, although our present rock gardens are built not wholly for either one but, seemingly, to combine features of both, the first idea seems to be most important. It is so nearly impossible to *effectively* duplicate a natural feature, because of the many things found in proximity to the majority of homes (streets, buildings, driveways, and even shrubs and trees) which tend immediately to destroy the imaginary scale and proportion of the construction detail, that the second suggestion at once assumes unimportant size. The implications of rock garden authorities add strength to this statement.

It follows, therefore, that the first hypothesis, which requires the subordination of the rock to the plant, is most logical though there is undoubtedly an addition of a part of the second idea so that one does attempt to imitate a natural feature in a very limited, simple sort of way. Effectiveness requires that one duplicate nature to a simple degree only, especially on small properties where space is held to a minimum. Where space is ample and where a natural ruggedness of topography prevails, it becomes more possible to make use of the extreme, complicated patterns and designs.

However, since the rockery movement is being fostered wholly by those who gain their greatest enjoyment out of the plants themselves, it remains that the underlying purpose will never be the collection and arrangement of rocks alone; the plants should and will always be of greater import.

The Present Situation

Now that we have set forth the fundamental reasons for rock gardening we may discuss for a moment the application of the basic principles to our present-day method and point out for our own benefit the errors that most commonly follow either a misunderstanding of or a total lack of awareness of, the original impulses.

Each year there arises a new group of rock garden enthusiasts who because of a lack of knowledge of these fundamentals throw together incongruous stone masses, wholly out-of-place as a rule, and place in the crevices plants of all kinds (annuals, biennials and greedy border perennials). The only justification for such builders is their eager persistence and enthusiasm. Of course all they need is the proper kind of guidance which has taken into consideration the underlying reasons for the existence of rock gardens. With such guidance they could easily be led to create quite reasonable and quite beautiful effects. Their error has been chiefly in the misinterpretation of the implications which attend the original impulses. Let us consider what these implications are.

(To Be Continued)

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